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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
 Trade name/designation : Ammonium polyphosphate liquid (APP L)
 Chemical name : Ammonium Polyphosphate
 EC No : 269-789-9
 CAS No. : 68333-79-9
 REACH registration No : 01-2120090300-70-0001
 Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

JSC Apatit
 Severnoye Shosse Str. 75
 162622 Cherepovets, Vologda Region - Russia
 T +7 (8202)5933-09 - F +7 (8202)5550-34
cherepovets@phosagro.ru

1.4. Emergency telephone number

Emergency number : +7 (8202) 59-35-15 (24/7) / +7(8202)5933-09 (8:30-17:30 Moscow Time)

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified


2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Not applicable.

2.3. Other hazards

Other hazards : Results of PBT and vPvB assessment : The study does not need to be conducted because the substance is inorganic.

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SECTION 3: Composition/information on ingredients

3.1. Substance

Substance name : Ammonium polyphosphate liquid (APP L)
CAS No. : 68333-79-9
EC No : 269-789-9

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polyphosphoric acids, ammonium salts	(CAS No.) 68333-79-9 (EC No) 269-789-9	35 - 37	Not classified
Ammonium dihydrogenorthophosphate	(CAS No.) 7722-76-1 (EC No) 231-764-5 (EC Index) -	9 - 10	Not classified
Diammonium hydrogenorthophosphate	(CAS No.) 7783-28-0 (EC No) 231-987-8 (EC Index) -	8 - 9	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. See also section 8. Never give anything by mouth to an unconscious person or a person with cramps. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

Inhalation : Keep at rest. Provide fresh air. If breathing is difficult, give oxygen. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Wash off with soap and water. In case of doubt or persistent symptoms, consult always a physician. Remove contaminated clothing and wash it before reuse.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

In case of ingestion : Give water to drink. Do not induce vomiting without medical advice. If symptoms persist, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.

Skin contact : No adverse effects are expected.

Eye contact : May cause eye irritation.

Ingestion : Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting. Abdominal pain. Diarrhoea.

Chronic symptoms : Anticipated delayed effects : Not known.

4.3. Indication of any immediate medical attention and special treatment needed


Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Carbon dioxide. Dry extinguishing powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media : None known.

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5.2. Special hazards arising from the substance or mixture

Specific hazards : Not flammable. When heated to decomposition, emits toxic fumes (>150°C). Nitrogen oxides. ammonia.

5.3. Advice for firefighters

Firefighting instructions : Evacuate personnel to a safe area. Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus. Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Provide adequate ventilation. Evacuate personnel to a safe area. Avoid contact with eyes. Do not breathe vapour. Use personal protective equipment as required. Reference to other sections: 8.

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".
For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Flush with plenty of water. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not get in eyes, on skin, or on clothing. Avoid inhalation of the product. Do not ingest. Take any precaution to avoid mixing with incompatible materials. See also section 10. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time).
Hygiene measures : Keep good industrial hygiene. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Wash hands and face before breaks and immediately after handling of the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities


Technical measures : Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food, drink and animal feedingstuffs.
Packaging materials : Keep/Store only in original container.

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Diammonium hydrogenorthophosphate (7783-28-0)		
Latvia	OEL TWA (mg/m ³)	6 mg/m ³

Ammonium polyphosphate liquid (APP L) (68333-79-9)	
DNEL/DMEL (additional information)	
Additional information	DNEL short-term : 36 mg/m ³ . DNEL Long term : 14 mg/m ³
PNEC (water)	
PNEC aqua (freshwater)	20 mg/l
PNEC aqua (marine water)	20 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC aqua (intermittent, marine water)	10 mg/l

Additional information : Concentration measurement in air. Personal air monitoring


8.2. Exposure controls

Engineering control measures	: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.
Personal protection equipment	: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hand protection	: Wear chemically resistant gloves (tested to EN374) . Nitrile rubber. Butyl rubber. natural rubber gloves. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves
Eye protection	: Safety glasses (EN166). tightly fitting safety goggles
Body protection	: Wear suitable coveralls to prevent exposure to the skin. Wear impervious rubber safety shoes
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). Full face mask (EN 136). Filter type: B/K (EN 141)
Thermal hazard protection	: Not required for normal conditions of use.
Environmental exposure controls	: Do not allow to enter into surface water or drains. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: liquid
Colour	: Green to brown.
Odour	: mild.
Odour threshold	: No data available
pH	: 6 - 7
Relative evaporation rate (butylacetate=1)	: Not applicable.
Melting point/freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: Not determined
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 150 °C
Flammability (solid, gas)	: The product is not flammable

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Vapour pressure	: 1,39 Pa @ 40°C / 110 Pa @ 60°C / 400 Pa @ 80°C Ammonia
Vapour density	: Not applicable
Relative density	: No data available
Density	: 1,41 - 1,47 g/cm ³ (@ 20°C)
Solubility	: Water: > 100 g/l (@ 20°C)
Partition coefficient n-octanol/water	: Not applicable
Kinematic viscosity	: No data available
Dynamic viscosity	: < 80 mPa.s (@ 20°C)
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: Non flammable

9.2. Other information

Other properties	: Crystallization temperature : >-20 °C.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heating can release hazardous gases. Reference to other sections: 5.2. Safe handling: see section 7.

10.5. Incompatible materials

alkalis + APP L. => ammonia. Strong acids + APP L. => Phosphoric acid. Safe handling: see section 7.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses. Burning produces noxious and toxic fumes. Reference to other sections: 5.2.


SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified (Based on available data, the classification criteria are not met)
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Polyphosphoric acids, ammonium salts (68333-79-9)	
LD50/oral/rat	4740 mg/kg
Ammonium dihydrogenorthophosphate (7722-76-1)	
LD50/oral/rat	5750 mg/kg
LD50/dermal/rat	> 7940 mg/kg
LD50/dermal/rabbit	> 7940 mg/kg
Diammonium hydrogenorthophosphate (7783-28-0)	
LD50/oral/rat	6500 mg/kg
LD50/dermal/rabbit	> 7950 mg/kg

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 6 - 7
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Serious eye damage/eye irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 6 - 7
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)

Ammonium polyphosphate liquid (APP L) (68333-79-9)	
NOAEL, oral	1500 mg/kg bw/day (28 days)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties	: Ecological injuries are not known or expected under normal use.
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Polyphosphoric acids, ammonium salts (68333-79-9)	
LC50 fish 1	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	123 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Diammonium hydrogenorthophosphate (7783-28-0)	
LC50 fish 1	26,5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	1790 mg/l
LC50 fish 2	24,8 - 29,4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC, LC50, algae, Freshwater	> 100 mg/l
NOEC, EC, LC10, algae, Freshwater	100 mg/l
EC, LC50, microorganisms	> 100 mg/l
NOEC, EC, LC10, microorganisms	100 mg/l

12.2. Persistence and degradability

Ammonium polyphosphate liquid (APP L) (68333-79-9)	
Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential


Ammonium polyphosphate liquid (APP L) (68333-79-9)	
Partition coefficient n-octanol/water	Not applicable
Bioaccumulative potential	According to experience not expected.
Ammonium dihydrogenorthophosphate (7722-76-1)	
BCF fish 1	(no bioaccumulation expected)
Diammonium hydrogenorthophosphate (7783-28-0)	
BCF fish 1	(no bioaccumulation expected)

12.4. Mobility in soil

Ammonium polyphosphate liquid (APP L) (68333-79-9)	
Mobility in soil	Not expected to adsorb on soil.

12.5. Results of PBT and vPvB assessment

Ammonium polyphosphate liquid (APP L) (68333-79-9)	
Results of PBT assessment	The study does not need to be conducted because the substance is inorganic.

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12.6. Other adverse effects

Other adverse effects : None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Handle with care. Safe handling: see section 7. Collect and dispose of waste product at an authorised disposal facility. Dispose of contaminated materials in accordance with current regulations.

Additional information : Dispose of contaminated materials in accordance with current regulations.

Further ecological information : Do not allow to enter into surface water or drains.

List of proposed waste codes/waste designations in accordance with EWC (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Transport document description				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Special precautions for user : Not applicable

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable


- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Code: IBC : Applicable.

IBC product name : Ammonium polyphosphate solution

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Ship type : Type 3
Pollution category : Z

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Ammonium polyphosphate liquid (APP L) is not on the REACH Candidate List

Ammonium polyphosphate liquid (APP L) is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 3; ID No. 8625)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Ammonium polyphosphate liquid (APP L) is listed

SZW-lijst van mutagene stoffen : Ammonium polyphosphate liquid (APP L) is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment


For this substance a chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	NA = Not applicable

Sources of key data used to compile the datasheet : Name (SDS) Ammonium polyphosphate liquid (APP L).
Manufacturer/Supplier JSC Apatit, Vologda Region, Russia. ECHA (European Chemicals Agency).

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The contents and format of this SDS are in accordance with EEC Commission Directive 2015/830/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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